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(71) Applicant

Raymond Peter

Ainsworth

196 Derby Road

Swanwick

Derbyshire

(72) Inventor

Raymond Peter

Ainsworth

(74) Agents

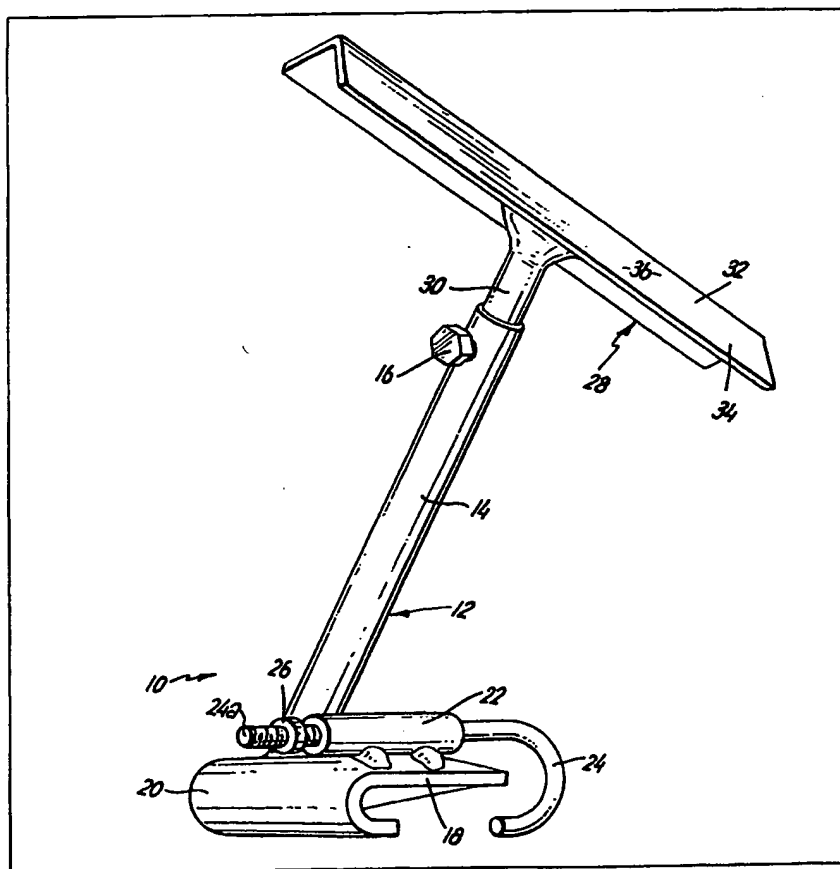
Swindell and Pearson

44 Friar Gate

Derby DE1 1DA

## (54) Brackets

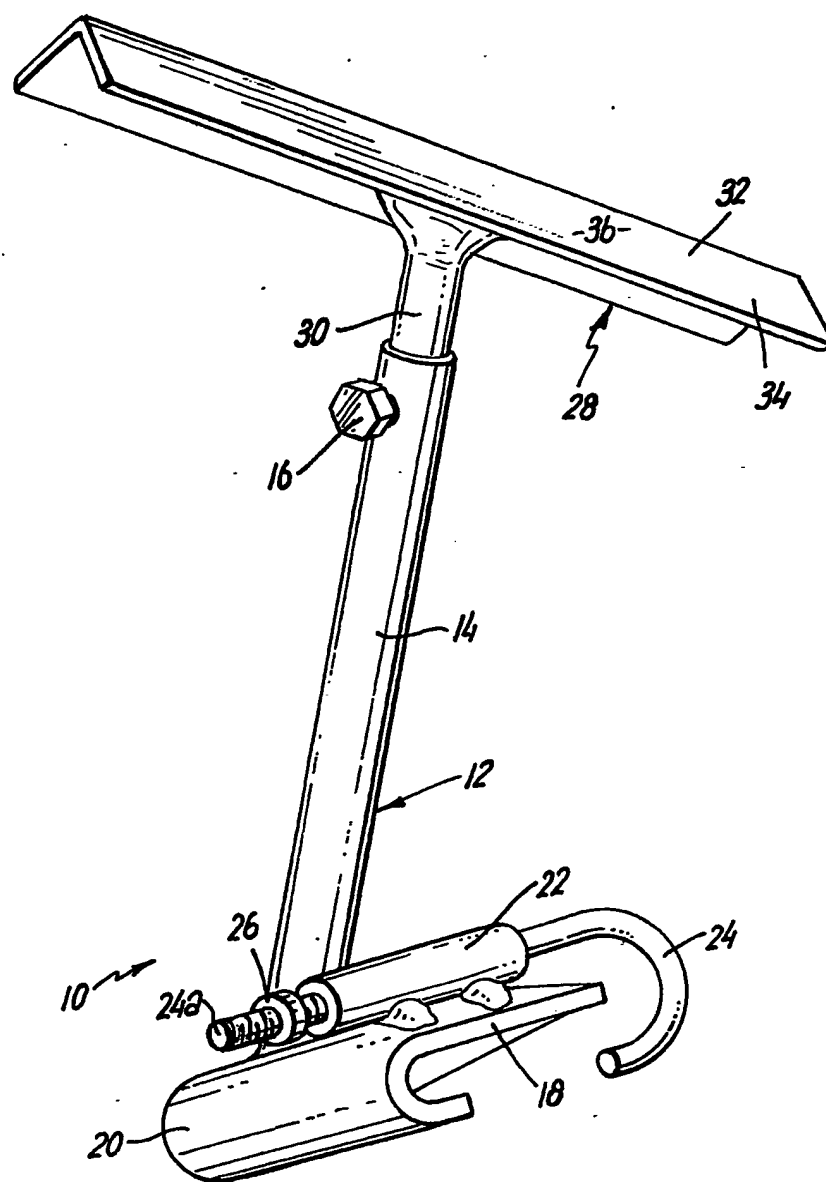
(57) A bracket (10) for the horizontal support in a mine roadway of a platform upon which is placed fire-dousable material (e.g. stone dust), has at one end, a clamp arrangement (20, 24) for securement to a roadway support, and at the other end, a support member (28), the latter being telescopically, and preferably also rotationally, adjustable with respect to the clamp arrangement.



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The drawing(s) originally filed was/were informal and the print here reproduced is taken from a later filed formal copy.

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## SPECIFICATION

### Brackets for fire control arrangements in mine roadways

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This invention is concerned with bracket devices for supporting fire control arrangements in mine roadways, particularly fire control arrangements comprising freely supported boards on which a fire dousing material such as stone-dust is located, whereby in the event of an explosion the board is blown off the bracket devices and the displaced dust douses any resultant fire.

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Conventional brackets for supporting fire control arrangements of this type are non-adjustable, and problems can be experienced when using the brackets in mine roadways where objects such as air ducting extend alongside the ring arches supporting the roadway. Also, in the event of encountering a gradient or drift in the roadway, problems arise in retaining the boards horizontal in order to retain the stone-dust.

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According to the present invention there is provided a bracket device for supporting a fire control arrangement in a mine roadway, the device comprising means for mounting the device on a roadway support frame so as to extend inwardly of the latter into the roadway, means spaced from the mounting means for supporting, in the roadway, a member on which fire dousing material can be located, and means for adjusting the spacing between the mounting means and the supporting means.

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Preferably, the mounting means is provided on a first part and the supporting means is provided on a second part, the first and second parts being telescopically arranged one within the other.

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Said one part may have a plurality of spaced apart through holes, and said other part may have a through hole, and a pin device may extend through the hole in said other part and a selected aligned hole of said one part whereby to lock said one part in any selected position within said other part.

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Preferably also, said one part is rotatable within said other part. In this event a locking bolt is located in a threaded aperture in said other part whereby to be engaged against said one part when the latter is moved to a selected position both telescopically and rotatably within said other part and thereby clamp the parts together.

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Advantageously the mounting means comprises a hook arrangement for engaging one side of a roadway support frame member and a J-bolt adjustably mounted on the hook arrangement to releasably engage the opposite side of the rotary support frame member, whereby the J-bolt can clamp on the roadway support frame member.

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An embodiment of the present invention

will now be described by way of example only with reference to the accompanying drawing, the single figure of which is a perspective view of a bracket device according to the invention.

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Referring to the drawing, a bracket 10 comprises a first part 12 defined by an elongate tubular section 14, at one end of which is provided an arrangement for mounting the bracket 10 on a mine roadway support frame member such as a ring arch (not shown). The tubular section 14 is open at its other end, and, at a location close to said other end, there is provided a locking bolt 16 engaged in a threaded aperture in the tubular section 14, whereby the bolt can be screwed into the section 14 for a purpose hereinafter described.

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The mounting arrangement comprise a base part 18, on one side of which is provided the tubular section 14, to extend angularly therefrom relative to the plane of the base part 18. The latter, at one edge, is formed with a hook portion 20 extending to the side thereof remote from the tubular section 14, whereby the hook portion 20 can engage over one edge of a ring arch. On said one side adjacent to the tubular section 14, the base part 18 also mounts a hollow tubular part 22 on an axis extending at right angles to said one edge of the base part 18. A J-bolt 24 has its longer leg 24a extending through the tubular part 22, a locking nut 26 being screwed onto the free end of the leg 24a after the latter has passed through the tubular part 22, whereby to retain the J-bolt 24 against removal from the tubular part 22. The hooked end of the bolt 24 can be located over the other edge of the ring arch and the nut 26 screwed tightly on the bolt 24 against the part 22, whereby to clamp the bracket on the ring arch.

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The bracket has a second part 28 defined by an elongate tubular section 30 which is telescopically mounted within the tubular section 14. Each of the sections 14 and 30 are of circular cross section, whereby the section 30 is also rotatable relative to the section 14. The section 30 mounts an elongate support member in the form of an angle section 32 with one leg 34 of the angle section 32 being arranged to provide a horizontal support surface 36 for a board (not shown) on which a fire dousing material such as stone-dust can be located.

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In use, the bracket 10 is clamped to an appropriate ring arch such that the tubular section 14 extends angularly upwardly therefrom into the roadway. The section 30 is telescopically adjusted relative to the section 14 until the angle section 32 is clear of any objects standing alongside the ring arches, such as air ducting, and also the section 30 is rotated in the section 14 until the surface 36 of the angle section 32 is horizontal. The bolt 16 is then screwed until it engages

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against the section 30 and can therefore clamp the latter in position.

It will be appreciated that not only does a telescopic arrangement allow for clearance of any obstructions, but the rotatable arrangement enables the support surface 36 to be kept horizontal even when the mine roadway has a gradient.

In a modification, where it may be desired only to provide for telescopic adjustment, it will be appreciated that any other suitable form of locking arrangement may be provided. For example, a through hole may be provided in the tubular section 14 and a plurality of through holes in the section 30. The latter is adjusted within the section 14 to align a selected through hole with the through hole in the section 14, and a locking pin can then be extended through the aligned holes to lock the section 30 in position. The pin may be retained on the bracket by being connected to one end of a chain or the like, the other end of which is fixed on the tubular section 14.

In the event of an explosion in the mine roadway, the board, which is freely or loosely supported on the support surfaces 36 of a plurality of the brackets 10, can be blown off, whereby to displace the stone-dust. The latter is tipped into the roadway to douse any fire resulting from the explosion.

Various modifications may be made without departing from the invention. For example it will be appreciated that any other suitable arrangement may be provided for mounting the bracket on a ring arch, and that the board support may be other than the form of angle section described and shown. Also the means for locking the sections together may be other than that described and shown.

Whilst endeavouring in the foregoing Specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature of combination of features hereinbefore referred to whether or not particular emphasis has been placed thereon.

#### CLAIMS

1. A bracket device for supporting a fire control arrangement in a mine roadway, the device comprising means for mounting the device on a roadway support frame so as to extend inwardly of the latter into the roadway, means spaced from the mounting means for supporting, in the roadway, a member on which fire dousing material can be located, and means for adjusting the spacing between the mounting means and the supporting means.

2. A bracket device as claimed in claim 1 in which the mounting means is provided on a first part and the supporting means is provided on a second part, the first and second parts being telescopically arranged on within

the latter.

3. A bracket device as claimed in claim 2 in which one of said first and second parts has a plurality of spaced apart through holes, and the other of said first and second parts has a through hole, a pin device being insertable through the hole in the said one part and a selected aligned hole in the said other part to lock said one part in a selected position relative to the other part.

4. A bracket device as claimed in claim 2 in which one of said first and second parts is provided with a threaded aperture and a locking screw engageable with the other of said first and second parts to clamp the said other part in a position selected telescopically and rotatably relative to the second part.

5. A bracket device as claimed in any of the preceding claims, in which the mounting means comprises a hook arrangement for engaging one side of a roadway support frame and a J bolt adjustably mounted on the hook arrangement to releasably engage the opposite side of the rotary support frame member whereby the J bolt can clamp on the roadway support member.

6. A bracket device as claimed in any preceding claim in which the supporting means is angle section material.

7. A bracket device substantially as hereinbefore described with reference to the accompanying drawing.

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